1471/65

FAIRCHILD SPACE AND DEFENSE SYSTEMS
A Division of Fairchild Camera and Instrument Corporation
300 Robbins Lane, Syosset, New York

Proposal No. SME-105-64-40
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(S. I. 890,017)

105 TECHNICAL PROPOSAL

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SECTION 1

INTRODUCTION

The following is Fairchild Camera and Instrument Corporation's response to three of the five technical items which we were asked to investigate on the 105 Program. The five items are:

- ITEM A

  An optional conversion of the chip printer to color printing from color input film.

- ITEM B

  Conversion of the chip printer's auxiliary printing system from the proposed FONT-Hammer System to a silicon diode array data block.

- ITEM C

  A change in the proposed location of the auxiliary information (across the narrow end of the film chip) to placement along the long edge of the film chip with security classification printed on the narrow ends.

- ITEM D

  Development of a method of roll film tension control that obviates the use of sensor arms that

could cause film damage.

- ITEM E

Development of a method of film metering, (applicable to the chip printer) that does not require the conventional rubber faced metering roller which, on some transport systems, faces the emulsion side of the film and causes film damage.

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Items A and B listed above are not included at this time. Item A is held due to a lack of information on new high resolution color film [redacted] example; can it be produced in chip form without severe curl, can it be processed and how, what are the full illumination requirements. The difficulties encountered here have been expressed to the customer's technical representative in a separate letter dated, 22 March 1965. It is now anticipated that a detailed meeting may be arranged with the customer, ourselves [redacted] in the near future to establish basic design parameters that will insure that operational functions are capable of color reproductions based upon the latest technology.

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Item B; technically is completed and is being priced out at our West Coast Division. This report will be forwarded within the next two weeks.

Our approaches to Items C, D, and E are covered in the body of this report.

1.1 RE-ARRANGED FORMAT

A thorough investigation has been made to uncover any difficulties which might be encountered in transferring the data recording area from across the short end of the chip to across the long end of the film chip. At this time no difficulties are envisioned. The only item of concern is whether we utilize the Mechanical Data Recording or the Silicon Light Pulser Data Recording System. However, in either case the mechanical system as proposed in the body of Phase I, can easily be turned at right angles and with minimum modification. Fortunately, this gives us more room and still operates correctly, while at the same time freeing us from previous space limitations which had been previously encountered. If the silicon light pulser is utilized, the new format arrangement is preferable.

A layout drawing is included with this report of the anticipated chip dimensions. It should be noted that certain dimensions have been changed to conform with the cutting dimensions spelled out [redacted] in November 1964.

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1.2 SENSOR ARMS

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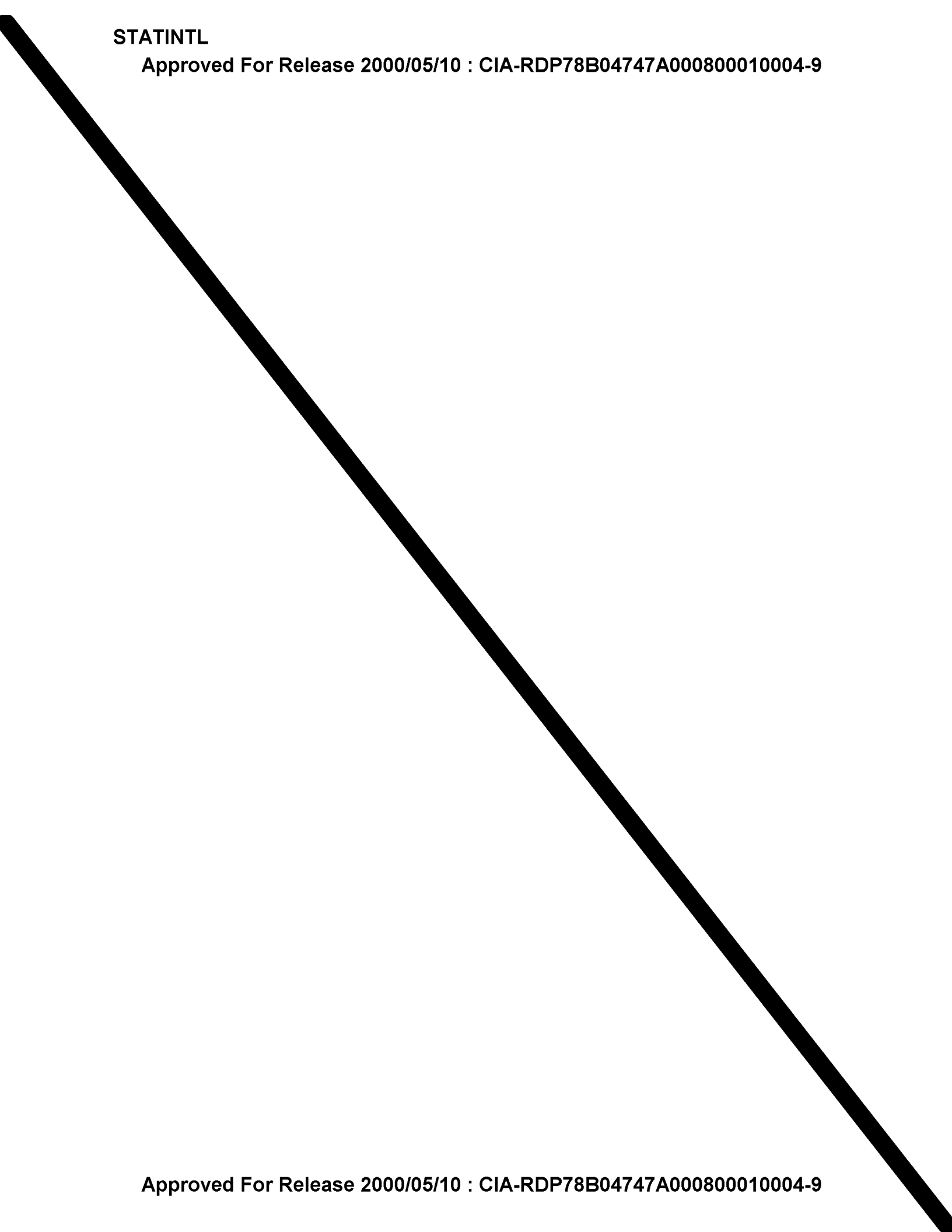
[redacted]



small negator spring which will self-balance the sensor arm over its entire throw. It is Fairchild Camera and Instrument Corporation's opinion that the design requirements as contemplated will afford a more accurate control over film tension than other systems, and although extremely sensitive can be made rugged and foolproof.

1.3 FILM METERING

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The present configuration has been established to incorporate at least 100° of film wrap on the metering roller which is the minimum which we feel necessary to achieve good positioning control.

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